

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (Previously presented) An exhaust gas purifying system provided with a NO_x occlusion reduction type catalyst having a catalyst metal and a NO_x occluding substance, in an exhaust passage of a diesel engine, and a control unit comprising a normal control operation means, a regeneration control initiation judging means for detecting a regeneration control initiation timing for said NO_x occlusion reduction type catalyst, a rich-burn control operation means for executing a rich-burn control operation for generating an exhaust gas which is in a fuel-rich state, accompanying recirculation of EGR gas, and a catalyst activation control operation means for executing a control operation for activating said catalyst metal immediately before said rich-burn control operation is performed;

wherein said catalyst activation control operation means executing a burning control operation in the vicinity of the stoichiometric air/fuel ratio in a range of 0.8 to 1.1 in terms of an excess air factor, in the condition of an EGR valve being totally closed, and at the same time, executing a multi-stage injection and an early injection in the fuel injection into cylinders and controlling the torque generation of the diesel engine by an intake control to reduce the torque variation during the transition from the normal control operation to the catalyst activation control operation, and

wherein regeneration control is performed, to thereby purge or release NO_x from a NO_x occlusion reduction type catalyst.

2. (Cancelled)

3. (Previously presented) The exhaust gas purifying system of claim 1, wherein:
said NO_x occlusion reduction type catalyst comprises a reducer occluding substance.

4. (Cancelled)

5. (Previously presented) The exhaust gas purifying system of claim 1, wherein:

said rich-burn control operation means recirculates EGR gas for generating an exhaust gas which is in a fuel-rich state and controls the torque generation of the diesel engine by an intake control of the diesel engine to reduce the torque variation during the transition from catalyst activation control operation to the rich-burn control operation or from the rich-burn control operation to the normal control operation.

6. (Previously presented) A method of exhaust gas purification to be carried out with use of an exhaust gas purifying system with a NO_x occlusion reduction type catalyst having a catalyst metal and a NO_x occluding substance, in an exhaust passage of a diesel engine, and a control unit comprising a normal control operation means, a regeneration control initiation judging means for detecting a regeneration control initiation timing for said NO_x occlusion reduction type catalyst, a rich-burn control operation means for executing a control operation for generating an exhaust gas which is in a fuel-rich state, accompanying recirculation of exhaust gas, and a catalyst activation control operation means for executing a control operation for activating said catalyst metal immediately before said rich-burn operation is performed, and performing a catalyst activation control operation by said catalyst activation control operation means when it is judged by said regeneration control initiation judging means that a regeneration control for the regeneration of the NO_x occlusion reduction type catalyst is to be initiated and thereafter executing a rich-burn control operation accompanying a recirculation of EGR gas by said rich-burn control operation means to thereby regenerate said NO_x occlusion reduction type catalyst, wherein in the course of said catalyst activation control operation, a burning control operation in the vicinity of the stoichiometric air/fuel ratio in the range of 0.8 to 1.1 in terms of an excess fuel factor is performed in the condition of the EGR valve being totally closed, and at the same time, a multi-stage injection and an early injection is executed in the fuel injection into cylinders and the torque control of the torque generation of the diesel engine by an intake control to reduce the torque variation during the transition from the normal control operation to the catalyst activation control operation, is executed, and

wherein regeneration control is performed, to thereby purge or release NO_x from a NO_x occlusion reduction type catalyst.

7. (Cancelled)

8. (Previously presented) The method of exhaust gas purification of claim 6, wherein:

said NO_x occlusion reduction type catalyst comprises a reducer occluding substance.

9. (Cancelled)

10. (Previously Presented) The method of exhaust gas purification of claim 6, which comprises performing said rich-burn control operation to recirculate EGR gas to generate an exhaust gas which is in a fuel-rich state and to control the torque generation of the diesel engine by an intake control of the diesel engine to reduce the torque variation during the transition from catalyst activation control operation to the rich-burn control operation or from the rich-burn control operation to the normal control operation.

11-12. (Cancelled)

13. (Previously Presented) A method for purifying exhaust gas provided with a NO_x occlusion reduction type catalyst in an exhaust passage of a diesel engine, comprising:
executing a normal control operation;
detecting a regeneration control initiation timing for said catalyst;
executing a rich-burn control operation and generating an exhaust gas which is in a fuel-rich state, accompanying recirculation of EGR gas; and
activating a catalyst metal of said catalyst immediately before said rich-burn control operation is performed,

wherein said catalyst includes a NO_x occluding substance that is transformed into nitrate as a result of occluding activities, which is then regenerated back to allow continuation of NO_x occlusion, and

wherein said catalyst activation control operation executes a burning control operation in the condition of an EGR valve being totally closed, and at the same time, controlling the torque generation of the diesel engine by an intake control to reduce the torque variation during the transition from the normal control operation to the catalyst activation control operation.